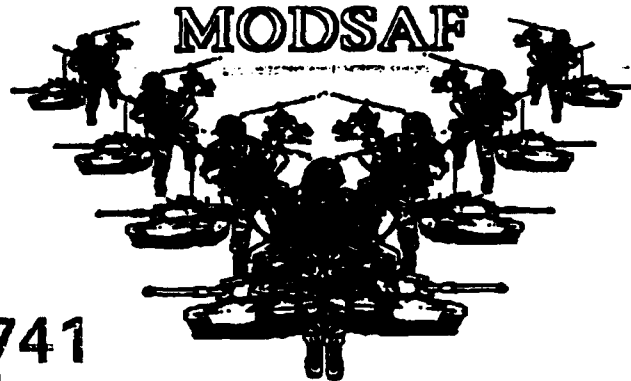


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Advanced Distributed Simulation Technology

Modular Semi-Automated Forces System (MODSAF) Installation Plan CDRL A008

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STRICOM

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13. ABSTRACT (Maximum 200 words) The MODSAF Installation Plan describes the installation process and site access requirements for installing Version 1.0 of the Modular Semi-Automated Forces System (MODSAF) 1.0. MODSAF is a Distributed Interactive Simulation (DIS) system for simulating and controlling entities such as vehicles, dismounted infantry, missiles, and dynamic structures on a virtual battlefield. These entities interact with each other and manned simulators to support training, combat development experiments, test, and evaluation studies in the DIS environment. MODSAF 1.0 is a replacement for the current SIMNET based Semi-Automated Forces (SAF).			
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Table of Contents

1	Introduction	1
2	Installation Process	3
2.1	Schedule and Notification	3
2.2	Local Responsibilities	3
2.2.1	Backup	3
2.2.2	Hardware Configuration	3
2.2.3	Operating System Software Configuration	4
2.2.4	Other Software Configuration	4
2.2.5	Network Configuration	4
2.3	Testing Environment	4
3	Site Access Requirements	7
3.1	Loading	7
3.2	Testing	7
3.3	Material Left at Site	7

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1 Introduction

This plan describes the installation process and site access requirements for installing Version 1.0 Modular Semi-Automated Forces (ModSAF) System. ModSAF 1.0 replaces the current Semi-Automated Forces (SAF) and provides equivalent capabilities in a more extensible architecture.

2 Installation Process

This section describes the installation process for ModSAF. While on-site, BBN will build the ModSAF applications from source code and install the executables. The actual installation instructions will be included as part of the deliverable supporting documentation.

There will be three different installations of ModSAF. The initial installation will be at Ft. Rucker for Beta test. After Beta test is complete, the final delivery of ModSAF will be installed at Ft. Rucker and at Ft. Knox.

2.1 Schedule and Notification

The installation of ModSAF by BBN will take place at a time mutually agreed upon by BBN and Loral, in accordance with the ModSAF site schedule, but not sooner than 15 days after the delivery of ModSAF to DARPA. The amount of time needed for installation will be approximately two days per site installation.

2.2 Loral Responsibilities

This section describes Loral's responsibilities during the installation of ModSAF by BBN.

2.2.1 Backup

The site will be responsible for backing up disks on the computers that ModSAF will be installed on. This will protect the site from loss of data due to hardware malfunction or operator mistake during the installation process. It will also allow the site to revert to previous versions of software if required in the future.

2.2.2 Hardware Configuration

BBN will support the installation of ModSAF on SGI workstations. ModSAF will require approximately 80 megabytes of random access memory (RAM) with 100 Mbytes of swap space. Approximately 400 megabytes of hard disk storage is consumed by the source code, object code,

terrain, executables, parameter files, and documentation. Note: disk partitioning may be required. The ModSAF files need not be located on the same disk drive. BBN will only install all the source code on one computer. The remaining computers will only have the code required to run the application installed on them which should require about 20 Mbytes for executables and parameters plus additional space for each terrain database. The Ft. Knox database requires about 15 Mbytes.

2.2.3 Operating System Software Configuration

For the SGI workstation, BBN will require the IRIX 4.0.5 operating system V (or compatible).

2.2.4 Other Software Configuration

BBN requires X Windows Version X11R4 for the ModSAF plan view display (PVD), Motif Version 1.1 (or compatible) for compiling the source code, and NFS software for file sharing. BBN requires a C compiler (version 2.0.1 or later) for the SGI workstation in order to compile the ModSAF software.

2.2.5 Network Configuration

BBN requires that the SGI workstations be properly configured and functioning on the network prior to BBN's installation of the ModSAF software.

Simulation machines must have access to the simulation network. For SGI workstations, root access is required to access the DIS or SIMNET network during testing and normal operation. ModSAF will handle both DIS 1.0 and SIMNET 6.6.1 protocols by using BBN's Simulation Network Interface Package (SNIP).

2.3 Testing Environment

The following equipment should be available at the site for BBN's installation testing:

- Eight SAF workstations, which can be used to run any ModSAF component, for testing the installation under multiple configurations.
- CD ROM player, for loading the SGI system software.

- One-quarter inch tape drive, for loading the ModSAF software.
- Three manned simulators (any combination of M1, M2, RWA, FWA) and enough staff to man one simulator at a time.
- The on-site Stealth, for verifying that ModSAF interoperates with the site.
- The on-site PVD, for verifying that ModSAF interoperates with the site.
- Access to telephones is essential and access to an Internet connection would be very useful.

This installation testing will take place prior to any site testing by the customer or acceptance procedure that will take place after installation.



3 Site Access Requirements

This section describes the site access requirements for loading and testing ModSAF. The site will provide all necessary physical access to BBN personnel who will load and test the delivered software.

3.1 Loading

BBN personnel will load the delivered ModSAF executable and source software on site. For SGI workstations, root access is required to access the DIS or SIMNET network during loading. BBN will install databases for Ft. Hunter-Liggett and Ft. Knox.

BBN will verify that the source code can be compiled into a working executable so that it will be possible for the site to install patches during the Beta testing process.

BBN will install the on-line documentation, Emacs, and Xinfo, including a draft user manual and programmer documentation.

3.2 Testing

Initial testing of the ModSAF software will take place at BBN Cambridge prior to shipment. After installation of the delivered software on site, BBN will perform limited testing to verify that the software functions and interoperates with the site. For SGI workstations, root access is required to access the DIS or SIMNET network during testing.

3.3 Material Left at Site

In addition to the source code, executables, and documentation that will be installed on the site computers, BBN will leave on site the source tapes of the delivered ModSAF software and the accompanying documentation. Four hardcopies of the user manual will be provided in addition to the on-line version. The tapes will include all software required to build the executables for source code.

